GLOSSARY

Additional theoretical lifetime cancer risk

The potential risk to an individual of developing cancer that could result from that individual's exposure to radiological contaminants over and above the existing risk from dying of cancer. The lifetime risk of death from cancer from all causes is 0.23, according to the U.S. National Center for Health Statistics (1998).

Background radiation

Radiation from naturally occurring radioactive materials as they exist in nature (such as radon) and cosmic rays from space filtered through the Earth's atmosphere. Other sources of background radiation include medical procedures (x-rays), air travel, consumer and industrial products, and fallout from prior nuclear weapons testing. Background radiation in the United States averages 300 millirem per year.

Berm

A sloped wall or embankment (typically constructed of earth, hay bales, or timber framing) used to prevent inflow or outflow of material into/from an area.

Contamination

The deposition of unwanted radioactive or hazardous material on the surfaces of structures, areas, objects, or people.

Decommissioning

The process of removing from service a facility that is no longer needed for its original purpose. For facilities in which nuclear materials were handled, it usually involves decontaminating the facility so that it may be dismantled or dedicated to other purposes.

Decontamination

The actions taken to reduce or remove substances that pose a substantial present or potential hazard to human health or the environment, such as radioactive contamination from facilities, soil, or equipment by washing, chemical action, mechanical cleaning, or other techniques.

Fast breeder reactor

A nuclear reactor with fertile material loaded around the core, to be converted into fissile material through neutron capture, which generates more fissile material than is consumed.

Latent cancer fatality

A fatality resulting from a cancer that was originally induced by radiation but which may occur years after the exposure. Small doses of radiation may result in fractional latent cancer fatalities, or only a probability that a latent cancer fatality may be incurred. The lower the fractional latent cancer fatality, the lower the probability that a latent cancer fatality will be incurred. For example, 1×10^{-4} probability of a latent cancer fatality means 1 chance in 10,000 of incurring a latent cancer fatality; 1×10^{-6} probability of a latent cancer fatality means 1 chance in 1 million of incurring a latent cancer fatality.

Maximally exposed individual

A hypothetical individual whose location and habits result in the highest possible total radiological or chemical exposure (and thus dose) from a particular source for all exposure routes (for example, inhalation, ingestion, direct exposure). For purposes of analyzing the offsite impacts of decontamination, decommissioning, and demolition activities at ETEC, the maximally exposed individual was assumed to be an individual living off the site in a residence 2,867 meters (9,406 feet) northwest of the Radioactive Materials Handling Facility. For purposes of analyzing the risk of residual contamination on the site following remediation, the maximally exposed individual was assumed to be an individual living on the site for 40 years. This is equivalent to the "average member of the critical group" used in 10 CFR 20.1402.

National Environmental Policy Act of 1969 (NEPA)

A federal act designed to promote inclusion of environmental concerns in federal decision-making. The Act is implemented by procedures issued by the Council on Environmental Quality and DOE.

Millirem

One-thousandth of a rem (0.001 rem); *see* "Rem."

Rem (Roentgen Equivalent in Man)

The unit of a dose equivalent from ionizing radiation to the human body that is used to measure the amount of radiation to which a person has been exposed.

Remediation

Action taken to permanently remedy a release or a threatened release of a hazardous substance to the environment, instead of or in addition to a removal action.

Scientific notation

A system of expressing very large or very small numbers based on the use of positive and negative powers of 10. A number written in scientific notation is expressed as the product of a number between 1 and 10 and a positive or negative power of 10.

Examples:
5,000 would be written as 5×10^{3}
0.005 would be written as 5×10^{-3}

Scoping

An early and open process for determining the range of issues to be addressed in an environmental impact statement or environmental assessment (EA) and for identifying the significant issues related to a proposed action.

Waste characterization

The identification of waste composition and properties by reviewing process knowledge, nondestructive examination, nondestructive assay, or sampling and analysis. Characterization provides the basis for determining appropriate storage, treatment, handling, transportation, and disposal requirements.

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